

RAW SEQUENCE LISTING
PATENT APPLICATION - US/08/849,404DATE: 09/09/97
TIME: 12:33:19

INPUT SET: S20138.raw

This Raw Listing contains the General
Information Section and up to the first 5 pages.

SEQUENCE LISTING

1
2
3 (1) General Information:
4
5 (i) APPLICANT: LISA ANNE LAFFEND
6 VASANTHA NAGARAJAN
7 CHARLES EDWIN NAKAMURA
8
9 (ii) TITLE OF INVENTION: BIOCONVERSION OF A FERMENTABLE
10 CARBON SOURCE TO 1,3-PROPANE-
11 DIOL BY A SINGLE MICROORGANISM
12
13 (iii) NUMBER OF SEQUENCES: 46
14
15 (iv) CORRESPONDENCE ADDRESS:
16 (A) ADDRESSEE: E. I. DUPONT DE NEMOURS AND COMPANY
17 (B) STREET: 1007 MARKET STREET
18 (C) CITY: WILMINGTON
19 (D) STATE: DELAWARE
20 (E) COUNTRY: UNITED STATES OF AMERICA
21 (F) ZIP: 19898
22
23 (iv) CORRESPONDENCE ADDRESS:
24 (A) ADDRESSEE: GENENCOR INTERNATIONAL, INC.
25 (B) STREET: 4 CAMBRIDGE PLACE
26 1870 SOUTH WINTON ROAD
27 (C) CITY: ROCHESTER
28 (D) STATE: NEW YORK
29 (E) COUNTRY: UNITED STATES OF AMERICA
30 (F) ZIP: 14618
31
32 (v) COMPUTER READABLE FORM:
33 (A) MEDIUM TYPE: 3.50 INCH DISKETTE
34 (B) COMPUTER: IBM PC COMPATIBLE
35 (C) OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
36 (D) SOFTWARE: MICROSOFT WORD VERSION 7.0a
37
38 (vi) CURRENT APPLICATION DATA:
39 (A) APPLICATION NUMBER:
40 (B) FILING DATE:
41 (C) CLASSIFICATION:
42
43 (vii) PRIOR APPLICATION DATA:
44 (A) APPLICATION NUMBER: 08/440,293
45 (B) FILING DATE: MAY 12, 1995
46

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/849,404DATE: 09/09/97
TIME: 12:33:24

INPUT SET: S20138.raw

47 (viii) ATTORNEY/AGENT INFORMATION:
48 (A) NAME: LINDA AXAMETHY FLOYD
49 (B) REGISTRATION NUMBER: 33,692
50 (C) REFERENCE/DOCKET NUMBER: CR-9715-C
51
52 (ix) TELECOMMUNICATION INFORMATION:
53 (A) TELEPHONE: 302-892-8112
54 (B) TELEFAX: 302-773-0164
55
56
57 (2) INFORMATION FOR SEQ ID NO:1:
58
59 (i) SEQUENCE CHARACTERISTICS:
60 (A) LENGTH: 12145 base pairs
61 (B) TYPE: nucleic acid
62 (C) STRANDEDNESS: single
63 (D) TOPOLOGY: linear
64
65 (ii) MOLECULE TYPE: DNA (genomic)
66
67 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
68
69 GTCGACCACC ACGGTGGTGA CTTTAATGCC GCTCTCATGC AGCAGCTCGG TGGCGGTCTC 60
70
71 AAAATTCAGG ATGTCGCCGG TATAGTTTTT GATAATCAGC AAGACGCCTT CGCCGCCGTC 120
72
73 AATTTGCATC GCGCATTCAA ACATTTTGTG CGGCGTCGGC GAGGTGAATA TTTCCCCCGG 180
74
75 ACAGGCGCCG GAGAGCATGC CCTGGCCGAT ATAGCCGCAG TGCATCGGTT CATGTCCGCT 240
76
77 GCCGCCGCCG GAGAGCAGGG CCACCTTGCC AGCCACCGGC GCGTCGGTGC GGGTCACATA 300
78
79 CAGCGGGTCC TGATGCAGGG TCAGCTGCGG ATGGGCTTTA GCCAGCCCCT GTAATTGTTC 360
80
81 ATTCAGTACA TCTTCAACAC GGTTAATCAG CTTTTTCATT ATTCAGTGCT CCGTTGGAGA 420
82
83 AGGTTCGATG CCGCCTCTCT GCTGGCGGAG GCGGTCATCG CGTAGGGGTA TCGTCTGACG 480
84
85 GTGGAGCGTG CCTGGCGATA TGATGATTCT GGCTGAGCGG ACGAAAAAA GAATGCCCCG 540
86
87 ACGATCGGGT TTCATTACGA AACATTGCTT CCTGATTTTG TTTCTTTATG GAACGTTTTT 600
88
89 GCTGAGGATA TGGTGAATA GCGAGCTGGC GCGCTTTTTT TCTTCTGCCA TAAGCGGCGG 660
90
91 TCAGGATAGC CGGCGAAGCG GGTGGGAAAA AATTTTTTGC TGATTTTCTG CCGACTGCGG 720
92
93 GAGAAAAGGC GGTCAAACAC GGAGGATTGT AAGGGCATTG TCGCGCAAAG GAGCGGATCG 780
94
95 GGATCGCAAT CCTGACAGAG ACTAGGGTTT TTTGTTCCAA TATGGAACGT AAAAAATTAA 840
96
97 CCTGTGTTTC ATATCAGAAC AAAAAGGCGA AAGATTTTTT TGTTCCCTGC CGGCCCTAGA 900
98
99 GTGATCGCAC TGCTCCGGTA CGCTCCGTTT AGGCCGCGCT TCACTGGCCG GCGCGGATAA 960

DATE: 09/09/97
TIME: 12:33:29

INPUT SET: S20138.raw

| | | | | | | | |
|-----|------------|------------|-------------|-------------|-------------|------------|------|
| 100 | | | | | | | |
| 101 | CGCCAGGGCT | CATCATGTCT | ACATGCGCAC | TTATTTGAGG | GTGAAAGGAA | TGCTAAAGT | 1020 |
| 102 | | | | | | | |
| 103 | TATTCAATCT | CCAGCCAAAT | ATCTTCAGGG | TCCTGATGCT | GCTGTTCTGT | TCGGTCAATA | 1080 |
| 104 | | | | | | | |
| 105 | TGCCAAAAAC | CTGGCGGAGA | GCTTCTTCGT | CATCGCTGAC | GATTTTCGTAA | TGAAGCTGGC | 1140 |
| 106 | | | | | | | |
| 107 | GGGAGAGAAA | GTGGTGAATG | GCCTGCAGAG | CCACGATATT | CGCTGCCATG | CGGAACGGTT | 1200 |
| 108 | | | | | | | |
| 109 | TAACGGCGAA | TGCAGCCATG | CGGAAATCAA | CCGTCTGATG | GCGATTTTGC | AAAAACAGGG | 1260 |
| 110 | | | | | | | |
| 111 | CTGCCGCGGC | GTGGTCGGGA | TCGGCGGTGG | TAAAACCCCTC | GATACCGCGA | AGGCGATCGG | 1320 |
| 112 | | | | | | | |
| 113 | TTACTACCAG | AAGCTGCCGG | TGGTGGTGAT | CCCGACCATC | GCCTCGACCG | ATGCGCCAAC | 1380 |
| 114 | | | | | | | |
| 115 | CAGCGCGCTG | TCGGTGATCT | ACACCGAAGC | GGGCGAGTTT | GAAGAGTATC | TGATCTATCC | 1440 |
| 116 | | | | | | | |
| 117 | GAAAAACCCG | GATATGGTGG | TGATGGACAC | GGCGATTATC | GCCAAAGCGC | CGGTACGCCT | 1500 |
| 118 | | | | | | | |
| 119 | GCTGGTCTCC | GGCATGGGCG | ATGCGCTCTC | CACCTGGTTC | GAGGCCAAAG | CTTGCTACGA | 1560 |
| 120 | | | | | | | |
| 121 | TGCGCGCGCC | ACCAGCATGG | CCGGAGGACA | GTCCACCGAG | GCGGCGCTGA | GCCTCGCCCG | 1620 |
| 122 | | | | | | | |
| 123 | CCTGTGCTAT | GATACGCTGC | TGGCGGAGGG | CGAAAAGGCC | CGTCTGGCGG | CGCAGGCCGG | 1680 |
| 124 | | | | | | | |
| 125 | GGTAGTGACC | GAAGCGCTGG | AGCGCATCAT | CGAGGCCAAC | ACTTACCTCA | GCGGCATTGG | 1740 |
| 126 | | | | | | | |
| 127 | CTTTGAAAGC | AGTGGCCTGG | CCGCTGCCCA | TGCAATCCAC | AACGGTTTCA | CCATTCTTGA | 1800 |
| 128 | | | | | | | |
| 129 | AGAGTGCCAT | CACCTGTATC | ACGGTGAGAA | AGTGGCCTTC | GGTACCCTGG | CGCAGCTGGT | 1860 |
| 130 | | | | | | | |
| 131 | GCTGCAGAAC | AGCCCGATGG | ACGAGATTGA | AACGGTGACG | GGCTTCTGCC | AGCGCGTCGG | 1920 |
| 132 | | | | | | | |
| 133 | CCTGCCGGTG | ACGCTCGCGC | AGATGGGCGT | CAAAGAGGGG | ATCGACGAGA | AAATCGCCGC | 1980 |
| 134 | | | | | | | |
| 135 | GGTGGCGAAA | GCTACCTGCG | CGGAAGGGGA | AACCATCCAT | AATATGCCGT | TTGCGGTGAC | 2040 |
| 136 | | | | | | | |
| 137 | CCCGGAGAGC | GTCCATGCCG | CTATCCTCAC | CGCCGATCTG | TTAGGCCAGC | AGTGGCTGGC | 2100 |
| 138 | | | | | | | |
| 139 | GCGTTAATTC | GCGGTGGCTA | AACCGCTGGC | CCAGGTCAGC | GGTTTTTCTT | TCTCCCTCC | 2160 |
| 140 | | | | | | | |
| 141 | GGCAGTCGCT | GCCGGAGGGG | TTCTCTATGG | TACAACGCGG | AAAAGGATAT | GACTGTTTCA | 2220 |
| 142 | | | | | | | |
| 143 | ACTCAGGATA | CCGGGAAGGC | GGTCTCTTCC | GTCATTGCCC | AGTCATGGCA | CCGCTGCAGC | 2280 |
| 144 | | | | | | | |
| 145 | AAGTTTATGC | AGCGCGAAAC | CTGGCAAACG | CCGCACCAGG | CCCAGGGCCT | GACCTTCGAC | 2340 |
| 146 | | | | | | | |
| 147 | TCCATCTGTC | GGCGTAAAC | CGCGCTGCTC | ACCATCGGCC | AGGCGGCGCT | GGAAGACGCC | 2400 |
| 148 | | | | | | | |
| 149 | TGGGAGTTTA | TGGACGGCCG | CCCCTGCGCG | CTGTTTATTC | TTGATGAGTC | CGCCTGCATC | 2460 |
| 150 | | | | | | | |
| 151 | CTGAGCCGTT | GCGGCGAGCC | GCAAACCCCTG | GCCCAGCTGG | CTGCCCTGGG | ATTTGCGGAC | 2520 |
| 152 | | | | | | | |

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/849,404DATE: 09/09/97
TIME: 12:33:35

INPUT SET: S20138.raw

| | | | | | | | |
|-----|-------------|------------|------------|------------|------------|-------------|------|
| 153 | GGCAGCTATT | GTGCGGAGAG | CATTATCGGC | ACCTGCGCGC | TGTCGCTGGC | CGCGATGCAG | 2580 |
| 154 | | | | | | | |
| 155 | GGCCAGCCGA | TCAACACCGC | CGGCGATCGG | CATTTTAAGC | AGGCGCTACA | GCCATGGAGT | 2640 |
| 156 | | | | | | | |
| 157 | TTTTGCTCGA | CGCCGGTGTT | TGATAACCAC | GGGCGGCTGT | TCGGCTCTAT | CTCGCTTTGC | 2700 |
| 158 | | | | | | | |
| 159 | TGTCCTGGTCG | AGCACCAGTC | CAGCGCCGAC | CTCTCCCTGA | CGCTGGCCAT | CGCCCCGCGAG | 2760 |
| 160 | | | | | | | |
| 161 | GTGGGTAACT | CCCTGCTTAC | CGACAGCCTG | CTGGCGGAAT | CCAACCGTCA | CCTCAATCAG | 2820 |
| 162 | | | | | | | |
| 163 | ATGTACGGCC | TGCTGGAGAG | CATGGACGAT | GGGGTGATGG | CGTGGAACGA | ACAGGGCGTG | 2880 |
| 164 | | | | | | | |
| 165 | CTGCAGTTTC | TCAATGTTCA | GGCGGCGAGA | CTGCTGCATC | TTGATGCTCA | GGCCAGCCAG | 2940 |
| 166 | | | | | | | |
| 167 | GGGAAAAATA | TCGCCGATCT | GGTGACCCTC | CCGGCGCTGC | TGCGCCGCGC | CATCAAACAC | 3000 |
| 168 | | | | | | | |
| 169 | GCCCCGCGCC | TGAATCACGT | CGAAGTCACC | TTTGAAAGTC | AGCATCAGTT | TGTCGATGCG | 3060 |
| 170 | | | | | | | |
| 171 | GTGATCACCT | TAAAACCGAT | TGTCGAGGCG | CAAGGCAACA | GTTTTATTCT | GCTGCTGCAT | 3120 |
| 172 | | | | | | | |
| 173 | CCGGTGGAGC | AGATGCGGCA | GCTGATGACC | AGCCAGCTCG | GTAAAGTCAG | CCACACCTTT | 3180 |
| 174 | | | | | | | |
| 175 | GAGCAGATGT | CTGCCGACGA | TCCGGAAACC | CGACGCCTGA | TCCACTTTGG | CCGCCAGGCG | 3240 |
| 176 | | | | | | | |
| 177 | GCGCGCGGCG | GCTTCCCGGT | GCTACTGTGC | GGCGAAGAGG | GGGTCCGGAA | AGAGCTGCTG | 3300 |
| 178 | | | | | | | |
| 179 | AGCCAGGCTA | TTCACAATGA | AAGCGAACGG | GCGGGCGGCC | CCTACATCTC | CGTCAACTGC | 3360 |
| 180 | | | | | | | |
| 181 | CAGCTATATG | CCGACAGCGT | GCTGGGCCAG | GACTTTATGG | GCAGCGCCCC | TACCGACGAT | 3420 |
| 182 | | | | | | | |
| 183 | GAAAATGGTC | GCCTGAGCCG | CCTTGAGCTG | GCCAACGGCG | GCACCCTGTT | TCTGGAAAAG | 3480 |
| 184 | | | | | | | |
| 185 | ATCGAGTATC | TGGCGCCGGA | GCTGCAGTCG | GCTCTGCTGC | AGGTGATTAA | GCAGGGCGTG | 3540 |
| 186 | | | | | | | |
| 187 | CTCACC CGCC | TCGACGCCCC | GCGCCTGATC | CCGGTGGATG | TGAAGGTGAT | TGCCACCACC | 3600 |
| 188 | | | | | | | |
| 189 | ACCGTCGATC | TGGCCAATCT | GGTGGAACAG | AACCGCTTTA | GCCGCCAGCT | GTACTATGCG | 3660 |
| 190 | | | | | | | |
| 191 | CTGCACTCCT | TTGAGATCGT | CATCCCGCCG | CTGCGCGCCC | GACGCAACAG | TATTCCGTCG | 3720 |
| 192 | | | | | | | |
| 193 | CTGGTGCATA | ACCGGTTGAA | GAGCCTGGAG | AAGCGTTTCT | CTTCGCGACT | GAAAGTGGAC | 3780 |
| 194 | | | | | | | |
| 195 | GATGACGCGC | TGGCACAGCT | GGTGCCCTAC | TCGTGGCCGG | GGAATGATTT | TGAGCTCAAC | 3840 |
| 196 | | | | | | | |
| 197 | AGCGTCATTG | AGAATATCGC | CATCAGCAGC | GACAACGGCC | ACATTGCGCT | GAGTAATCTG | 3900 |
| 198 | | | | | | | |
| 199 | CCGGAATATC | TCTTTTCCGA | GCGGC GGGC | GGGATAGCG | CGTCATCGCT | GCTGCCGGCC | 3960 |
| 200 | | | | | | | |
| 201 | AGCCTGACTT | TTAGCGCCAT | GAAAAAGGAA | GCTATTATTC | ACGCCGCCCC | GGTGACCAGC | 4020 |
| 202 | | | | | | | |
| 203 | GGGCGGGTGC | AGGAGATGTC | GCAGCTGCTC | AATATCGGCC | GCACCACCCT | GTGGCGCAAA | 4080 |
| 204 | | | | | | | |
| 205 | ATGAAGCAGT | ACGATATTGA | CGCCAGCCAG | TTCAAGCGCA | AGCATCAGGC | CTAGTCTCTT | 4140 |

INPUT SET: S20138.raw

| | | | | | | | |
|-----|-------------|------------|-------------|-------------|------------|------------|------|
| 206 | | | | | | | |
| 207 | CGATTTCGCGC | CATGGAGAAC | AGGGCATCCG | ACAGGCGATT | GCTGTAGCGT | TTGAGCGCGT | 4200 |
| 208 | | | | | | | |
| 209 | CGCGCAGCGG | ATGCGCGCGG | TCCATGGCCG | TCAGCAGGCG | TTCGAGCCGA | CGGGACTGGG | 4260 |
| 210 | | | | | | | |
| 211 | TGCGCGCCAC | GTGCAGCTGG | GCAGAGGCGA | GATTCCTCCC | CGGGATCACG | AACTGTTTTA | 4320 |
| 212 | | | | | | | |
| 213 | ACGGGCCGCT | CTCGGCCATA | TTGCGGTCGA | TAAGCCGCTC | CAGGGCGGTG | ATCTCCTCTT | 4380 |
| 214 | | | | | | | |
| 215 | CGCCGATCGT | CTGGCTCAGG | CGGGTCAGGC | CCC GCGCATC | GCTGGCCAGT | TCAGCCCCCA | 4440 |
| 216 | | | | | | | |
| 217 | GCACGAACAG | CGTCTGCTGA | ATATGGTGCA | GGCTTTCCCG | CAGCCCGGCG | TCGCGGGTCG | 4500 |
| 218 | | | | | | | |
| 219 | TGGCGTAGCA | GACGCCCAGC | TGGGATATCA | GTTTCATCGAC | GGTGCCGTAG | GCCTCGACGC | 4560 |
| 220 | | | | | | | |
| 221 | GAATATGGTC | TTTCTCGATG | CGGCTGCCGC | CGTACAGGGC | GGTGGTGCCT | TTATCCCCGG | 4620 |
| 222 | | | | | | | |
| 223 | TGCGGGTATA | GATACGATAC | ATTCACTTTC | TCTCACTTAA | CGGCAGGACT | TTAACCAGCT | 4680 |
| 224 | | | | | | | |
| 225 | GCCCCGCGTT | GGCGCCGAGC | GTACGCAGTT | GATCGTCGCT | ATCGGTGACG | TGTCCGGTAG | 4740 |
| 226 | | | | | | | |
| 227 | CCAGCGGCGC | GTCCGCCGGC | AGCTGGGCAT | GAGTGAGGGC | TATCTCGCCG | GACGCGCTGA | 4800 |
| 228 | | | | | | | |
| 229 | GCCCCGATACC | CACCCGCAGG | GGCGAGCTTC | TGGCCGCCAG | GGCGCCGAGC | GCAGCGGCGT | 4860 |
| 230 | | | | | | | |
| 231 | CACCGCCTCC | GTCATAGGTT | ATGGTCTGGC | AGGGGACCCC | CTGCTCCTCC | AGCCCCCAGC | 4920 |
| 232 | | | | | | | |
| 233 | ACAGCTCATT | GATGGCGCCG | GCATGGTGCC | CGCGCGGATC | GTA AACAGG | CGTACGCCTG | 4980 |
| 234 | | | | | | | |
| 235 | GCGGTGAAAG | CGACATGACG | GTCCCCCTCGT | TAACACTCAG | AATGCCTGGC | GGAAAATCGC | 5040 |
| 236 | | | | | | | |
| 237 | GGCAATCTCC | TGCTCGTTGC | CTTTACGCGG | GTTTCGAGAAC | GCATTGCCGT | CTTTTAGAGC | 5100 |
| 238 | | | | | | | |
| 239 | CATCTCCGCC | ATGTAGGGGA | AGTCGGCCTC | TTTTACCCCC | AGATCGCGCA | GATGCTGCGG | 5160 |
| 240 | | | | | | | |
| 241 | AATACCGATA | TCCATCGACA | GACGCGTGAT | AGCGGCGATG | GCTTTTTCCG | CCGCGTCGAG | 5220 |
| 242 | | | | | | | |
| 243 | AGTGGACAGT | CCGGTGATAT | TTTCGCCCAT | CAGTTCAGCG | ATATCGGCGA | ATTTCTCCGG | 5280 |
| 244 | | | | | | | |
| 245 | GTTGGCGATC | AGGTTGTAGC | GCGCCACATG | CGGCAGCAGG | ACAGCGTTGG | CCACGCCGTG | 5340 |
| 246 | | | | | | | |
| 247 | CGGCATGTCT | TACAGGCCGC | CCAGCTGGTG | CGCCATGGCG | TGCACGTAGC | CGAGGTTGGC | 5400 |
| 248 | | | | | | | |
| 249 | GTTATTGAAA | GCCATCCCCG | CCAGCAGAGA | AGCATAGGCC | ATGTTTTCCC | GCGCCTGCAG | 5460 |
| 250 | | | | | | | |
| 251 | ATTGCTGCCG | AGGGCCACGG | CCTGGCGCAG | GTTGCGGGCG | ATGAGGCGGA | TCGCCTGCAT | 5520 |
| 252 | | | | | | | |
| 253 | GGCGGCGGCG | TCCGTCAACG | GGTTAGCGTC | TTTGGAGATA | TAGGCCTCTA | CGGCGTGGGT | 5580 |
| 254 | | | | | | | |
| 255 | CAGGGCATCC | ATCCCGGTCT | CCGCGGTCAG | GGCGGCCGGT | TTACCGATCA | TCAGCAGTGG | 5640 |
| 256 | | | | | | | |
| 257 | ATCGTTGATA | GAGACCGACG | GCAGTTTGCG | CCAGCTGACG | ATCACAAACT | TCACTTTGGT | 5700 |
| 258 | | | | | | | |

RAW SEQUENCE LISTING
PATENT APPLICATION - US/08/849,404

DATE: 09/09/97
TIME: 12:33:46

INPUT SET: S20138.raw

******* PREVIOUSLY ERRORED SEQUENCES - EDITED *******

1005 (2) INFORMATION FOR SEQ ID NO:39:
1006
1007 (i) SEQUENCE CHARACTERISTICS:
1008 (A) LENGTH: 34 base pairs
1009 (B) TYPE: nucleic acid
1010 (C) STRANDEDNESS: single
1011 (D) TOPOLOGY: linear
1012
1013 (ii) MOLECULE TYPE: DNA (genomic)
1014
1015 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:
1016
1017 GGAATTCAGA TCTCAGCAAT GCAACAGACA ACCC
1018

34

PAGE: 1

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/849,404

DATE: 09/09/97
TIME: 12:33:48

INPUT SET: S20138.raw

Line

Error

Original Text

RAW SEQUENCE LISTING
PATENT APPLICATION: US/08/849,404DATE: 09/09/97
TIME: 12:26:54

INPUT SET: S20138.raw

This Raw Listing contains the General
Information Section and those Sequences
containing ERRORS.

Does Not Comply
Corrected Diskette Needed

SEQUENCE LISTING

1
2
3 (1) General Information:
4
5 (i) APPLICANT: LISA ANNE LAFFEND
6 VASANTHA NAGARAJAN
7 CHARLES EDWIN NAKAMURA
8
9 (ii) TITLE OF INVENTION: BIOCONVERSION OF A FERMENTABLE
10 CARBON SOURCE TO 1,3-PROPANE-
11 DIOL BY A SINGLE MICROORGANISM
12
13 (iii) NUMBER OF SEQUENCES: 46
14
15 (iv) CORRESPONDENCE ADDRESS:
16 (A) ADDRESSEE: E. I. DUPONT DE NEMOURS AND COMPANY
17 (B) STREET: 1007 MARKET STREET
18 (C) CITY: WILMINGTON
19 (D) STATE: DELAWARE
20 (E) COUNTRY: UNITED STATES OF AMERICA
21 (F) ZIP: 19898
22
23 (iv) CORRESPONDENCE ADDRESS:
24 (A) ADDRESSEE: GENENCOR INTERNATIONAL, INC.
25 (B) STREET: 4 CAMBRIDGE PLACE
26 1870 SOUTH WINTON ROAD
27 (C) CITY: ROCHESTER
28 (D) STATE: NEW YORK
29 (E) COUNTRY: UNITED STATES OF AMERICA
30 (F) ZIP: 14618
31
32 (v) COMPUTER READABLE FORM:
33 (A) MEDIUM TYPE: 3.50 INCH DISKETTE
34 (B) COMPUTER: IBM PC COMPATIBLE
35 (C) OPERATING SYSTEM: MICROSOFT WORD FOR WINDOWS 95
36 (D) SOFTWARE: MICROSOFT WORD VERSION 7.0a
37
38 (vi) CURRENT APPLICATION DATA:
39 (A) APPLICATION NUMBER:
40 (B) FILING DATE:
41 (C) CLASSIFICATION:
42
43 (vii) PRIOR APPLICATION DATA:
44 (A) APPLICATION NUMBER: 08/440,293
45 (B) FILING DATE: MAY 12, 1995

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/849,404DATE: 09/09/97
TIME: 12:26:58

INPUT SET: S20138.raw

46
47 (viii) ATTORNEY/AGENT INFORMATION:
48 (A) NAME: LINDA AXAMETHY FLOYD
49 (B) REGISTRATION NUMBER: 33,692
50 (C) REFERENCE/DOCKET NUMBER: CR-9715-C
51
52 (ix) TELECOMMUNICATION INFORMATION:
53 (A) TELEPHONE: 302-892-8112
54 (B) TELEFAX: 302-773-0164
55
56

ERRORED SEQUENCES FOLLOW:

1005 (2) INFORMATION FOR SEQ ID NO:39:
1006
--> 1007 (i) SEQUENCE CHARACTERISTICS:
--> 1008 (A) LENGTH: 34 base pairs
--> 1009 (B) TYPE: nucleic acid
--> 1010 (C) STRANDEDNESS: single
--> 1011 (D) TOPOLOGY: linear
1012
1013 (ii) MOLECULE TYPE: DNA (genomic)
1014
--> 1015 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:
1016
1017 GGAATTCAGA TCTCAGCAAT GCAACAGACA ACCC
1018

34

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/849,404DATE: 09/09/97
TIME: 12:27:02

INPUT SET: S20138.raw

| Line | Error | Original Text |
|------|--|---|
| 994 | Entered (35) and Calc. Seq. Length (34) differ | (A)LENGTH: 35 base pairs |
| 1007 | Unknown or Misplaced Identifier | (I)SEQUENCE CHARACTERISTICS: |
| 1008 | Unknown or Misplaced Identifier | (A)LENGTH: 34 base pairs |
| 1009 | Unknown or Misplaced Identifier | (B)TYPE: nucleic acid |
| 1010 | Unknown or Misplaced Identifier | (C)STRANDEDNESS: single |
| 1011 | Unknown or Misplaced Identifier | (D)TOPOLOGY: linear |
| 1015 | Wrong Or Missing Strandedness Value | (xi)SEQUENCE DESCRIPTION: SEQ ID NO:39: |
| 1015 | Wrong or Missing Sequence Topology | (xi)SEQUENCE DESCRIPTION: SEQ ID NO:39: |

CRF Errors Corrected by the STIC System Branch

Serial Number: 08/849,404

1808
9/8/97
CRF Processing Date: 9/8/97
Edited by: [Signature]
Verified by: [Signature] (STIC staff)

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☒ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- Other: _____

***Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.**